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| 10/535,264 | 05/17/2005 | Kenichi Suzuki | 000023-065 | 3874 |
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| EXAMINER | | | | |
| CHIRISS, JENNIFER A | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary

Application No.

10/535,264

Applicant(s)

SUZUKI ET AL.

Examiner

JENNIFER A. CHRISS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's Amendments and Accompanying Remarks filed on May 21, 2008 has been entered and carefully considered. Claims 1 and 4- 7 are pending. In view of Applicant's amendment to claim 1 requiring that the conjugate fiber has a "concentric sheath-core configuration, in which the core resin has the earliest induction period of strain-induced crystallization", the Examiner has withdrawn the rejection over Nakajima et al. as detailed in the Office Action dated March 20, 2008. The invention as currently claimed is not found to be patentable for reasons herein below.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Declaration under 37 CFR 1.132

3. The Declaration under 37 CFR 1.132 filed May 21, 2008 is insufficient to overcome the rejection of claims 1 and 4 - 7 based upon Nakajima et al. (US 6,274,237) as set forth in the last Office action because: the Affidavit is no longer relevant in light of the amendment to claim 1 as Nakajima et al. (US 6,274,237) only discloses the use of

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eccentric sheath-core configurations in Applicant's claimed percentage ratio while Applicant now requires concentric sheath-core configurations, where the resin having the earliest induction period of strain-induced crystallization is contained in an amount of 1 to 30% wt of the fiber.

Claim Rejections - 35 USC § 103

4. Claims 1 and 4 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takaoka et al. (US 6,156,679).

Takaoka et al. is directed to a heat-fusible composite fiber and a non-woven fabric produced from the same (Title) suitable for use in hygienic products such as diapers and sanitary napkins (column 12, lines 15 – 30).

As to claim 1, Takaoka et al. teach a composite fiber comprising a sheath component of a crystalline propylene copolymer having a low melting point and a core component of a crystalline polypropylene resin having a higher melting point (column 2, lines 40 - 50). Takaoka et al. teach that the composite fiber is a coaxial sheath-core type (column 5, lines 10 - 15); the Examiner equates this to Applicant's "concentric sheath-core configuration". The crystalline polypropylene used as the high melting point core component comprises a propylene homopolymer or propylene as the main constituent and a small amount of one or more members selected from the group consisting of ethylene, butene-1, pentene-1, hexene-1, octene-1, nonene-1, and 4-methyl-pentene-1 and has a MFR (melt flow rate) (230 degrees C, 2.16 kg) of 1 to 50 and melting point of 157 degrees C or above (column 3, lines 18 - 30). The crystalline propylene copolymer

used as the low melting sheath component comprises a crystalline polymer comprising propylene and one or more members selected from the group consisting of ethylene, butene-1, pentene-1, hexene-1, octene-1, nonene-1, and 4-methyl-pentene-1 and has a MFR (melt flow rate) (230 degrees C, 2.16 kg) of 1 to 50 and melting point of 110 to 150 degrees (column 3, lines 30 - 45). The Examiner submits that the sheath and core components of Takaoka et al. encompass Applicant's "at least two olefin-based polymers being of the same kind" as defined on page 9 of the Specification. Takaoka et al. teach that the composite fiber has 3 – 60 crimps/25 mm (column 5, lines 35 – 45); the Examiner equates this lower end of the range to Applicant's "substantially no crimps". Takaoka et al. teach using the composite fibers in heat-and-pressure bonding or hot-air bonding processes to create a non-woven fabric (column 2, lines 30 – 37). As Takaoka et al. discusses using heat and pressure to bond the composite fibers together, the Examiner submits that product of Takaoka et al. can be equated to a "spunbonded fabric".

As to claim 5, Takaoka et al. teach a composite fiber comprising a sheath component of a crystalline propylene copolymer having a low melting point and a core component of a crystalline polypropylene resin having a higher melting point (column 2, lines 40 - 50). It should be noted that both components are propylene-based polymers as required by Applicant.

As to claims 6 – 7, Takaoka et al. teach the use of the composite fiber nonwoven fabric in various applications including hygienic products such as diapers and sanitary napkins (column 12, lines 15 - 30).

Takaoka et al. teach that the composite fiber has a sheath/core weight ratio *preferably* between 20/80 and 70/30. Takaoka et al. fails to teach that the core (area of earliest induction period of strain-induced crystallization) is contained in an amount of 1 to 30% by weight of the fiber. It should be noted that the weight percentage/ratio of the core as a function of the fiber is result effective variable. Takaoka et al. teach that, if the content of the sheath is less than 20% by weight, the thermal adhesion of the resultant fiber is lowered and the desired tenacity and adhesiveness of the nonwoven fabric produced is compromised. Additionally, if the content of the sheath exceeds 70 percent by weight, the heat shrinkage of the fiber is increased and the dimensional stability tends to lower, although the thermal adhesion is sufficiently high (see Takaoka et al., column 5, lines 10 - 27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the composite fiber of Takaoka et al. with a core comprising 1 to 30% by weight of the fiber since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the core weight percent motivated by the desire to create a non-woven fabric having the desired thermal adhesion balanced with heat shrinkage properties.

Takaoka et al. teach the claimed invention but fail to teach that the two olefin-based polymers have a difference between induction periods of strain-induced

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crystallization as measured at the same temperature and the same shear strain rate, of 100 second or longer as required by claim 1 and fail to teach the extensibility at a maximum load of not less than 70% in the MD and/or CD direction as required by claim 4. It is reasonable to presume that the extensibility is inherent to Takaoka et al. Support for said presumption is found in the use of like materials (i.e. a spunbonded fabric comprising concentric sheath-core composite fibers where sheath has a lower melting temperature than the core and the fibers have substantially no crimps. In particular, see Examples 2 - 4, 6 - 7, 9 - 11 and 14 - 19 which disclose composite fibers having core and sheath resins which are similar in melt temperature and composition as discussed by Takaoka et al.) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Takaoka et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977). Reliance upon inherency is not improper even though the rejection is based on Section 103 instead of 102. *In re Skoner*, et al. (CCPA) 186 USPQ 80.

Response to Arguments

5. Applicant's arguments with respect to claims 1 and 4 - 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. CHRISS whose telephone number is (571)272-7783. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 6 p.m., first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. A. C./
Examiner, Art Unit 1794

/Ula C Ruddock/
Primary Examiner, Art Unit 1794

